Terrestrial Planet Finder Technology Development
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One of humanity's oldest questions is whether life exists elsewhere in the universe. The Terrestrial Planet Finder mission will survey approximately 150 stars in our stellar neighborhood to search for planets and perform spectroscopic measurements to identify potential biomarkers in their atmospheres. TPF is currently planned for launch around 2015.

In April, 2000, JPL commissioned four subcontractor teams composed of scientists, engineers, and technologists to identify mission architectures capable of meeting the TPF science requirements. In the first phase of the two-phase study effort, each of the teams explored a very diverse range of architectures. At the end of this phase the teams recommended a small number of concepts further study based on their engineering feasibility. In the second phase, which ended in December 2001, each team focused on determining the science performance and engineering and technology requirements of a single architecture. With input from the TPF Science Working Group and TPF Technology Panel, JPL selected a visible coronagraph concept and an infrared interferometer concept for further study and technology development.

The TPF Project is now beginning an intensive period of technology development, design study, and scientific investigation in support of the selection of a single architecture around 2006. Substantial funding has been allocated to support these three main areas, with the bulk being targeted to developing the key technologies for both selected architectures. The technology requirements will be refined with input from scientific studies and mission design studies occurring in parallel with the technology development.